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Northern California

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July 28, 1997

Kate Hansel  
CALFED Bay-Delta Program  
1416 Ninth Street, Suite 1155  
Sacramento, CA 95814

Dear Ms. Hansel:

Please accept this Inquiry Submittal for a series of field-based teacher training institutes which, as a whole, encompass the geographic and habitat diversity of the Bay Delta watershed under the Request for Proposals, 1997 Category III.

Please contact me if you have need for any further information.

Thank you,

Wendy J. Wickizer, RPF 1972  
Education/Stewardship Coordinator

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## **Project Title and Applicant Name**

**Title:** FIELD BASED EXPERIENTIAL WORKSHOPS FOR K-12 TEACHERS

**Applicant:** Northern California Society of American Foresters, 2890 Kilgore Road, Suite B, Rancho Cordova, CA 95829. (916)952-0444 or FAX (916)638-9326 or email: ncsaf@interserv.com

## **Project Description and Primary Biological/Ecological Objectives**

### Description

This joint venture project would provide scholarships for K-12<sup>th</sup> grade teachers to attend a series of field-based teacher training institutes which, as a whole, encompass the geographic and habitat diversity of the Bay Delta watershed. The institutes would address the ecology and management of habitats and species from headwaters to bay. This includes forest ecosystems, agricultural wetlands, and bay area aquatic habitat and wildlife. The project would leverage the success of existing exemplary institutes by linking them as a single, long term opportunity for teachers to gain a broad understanding of the Bay Delta watershed ecology and processes. In turn, teachers will transfer the concepts they have learned to an exponentially greater number of students.

### Objectives

The primary objective of this project is to provide K-12<sup>th</sup> grade teachers with knowledge, skills and tools to effectively teach their students about ecology and management practices which are essential components of the Bay Delta region. There is no direct, on-site ecological or biological benefit relating to either stressors or priority species or habitats. However, the indirect benefits of teacher education will be vastly more important in the long term as teachers transfer knowledge to their students. The fundamental purpose of the institutes is to provide instruction on the relationship of organisms to their environment (ecology) as well as the role of humans and management. Furthermore, the reason for providing a series of institutes is to emphasize the essential linkages of the multiple systems which embody the Bay-Delta watersheds. The list of stressors provided in the "Stressors and Example Restoration Actions" document essentially outlines the subjects which are presented at the institutes. The priority species and habitats are an integral part of the field-based aspects of the institutes. The institutes address both the science and social science. They provide a forum for balanced scientific instruction and open discussions of issues. The long term result is a more knowledgeable populace who will directly and indirectly affect the primary habitats and species through their personal behavior and societal choices. Although the Bay-Delta project is regional, its effects and is effected by human behavior and decisions statewide. Teachers who attend the institutes are from all regions of California and will instruct children with a broad diversity of ethnic, financial, geographic and social backgrounds.

### **Approach/Tasks/Schedule**

The approach is to offer teacher scholarships to a series of three, one-week institutes over the course of 3 years. A Formal Proposal would delineate the total number of years and total cost. The institutes would cover forested ecosystems, agriculture/wetlands and bay habitats/wildlife. A scholarship recipient would commit to attend all three institutes in three years. The institutes are presently functioning but without the linkages previously described. The Forestry Institute for Teachers is offered by the Northern California Society of American Foresters in cooperation with Shasta County Office of Education, UC Cooperative Extension Service and other supporters. The Summer Agricultural Institute is offered by the California Foundation for Agriculture in the Classroom. Possible bay institutes are San Francisco Bay Model Teachers Institute, Save the Bay Teacher Training, Making Waves on the Bay Shore or a similar workshop. Each institute relies on field-based, experiential learning, balanced science based information, use of existing exemplary curriculum (Project Wet, Project Wild, Project Learning Tree, OBIS, CLASS, etc.). Participants are instructed in content, provided opportunities for hands on experiences and have classroom

appropriate lessons modeled on site. Tasks would primarily be the administrative aspects of promoting the joint venture, registration and distribution of grant funds. The first series of scholarships could be offered as soon as summer of 1998 if the November funding cycle is finalized prior to February 1, 1998 (distribution of applications).

#### Justification for Project and Funding by CALFED

It is appropriate for these scholarships to be funded by CALFED as it is an effective method of leveraging the success and expertise involved in existing institutes to provide a comprehensive Bay-Delta environmental education opportunity. Previously the institutes have been offered on a "stand-alone" basis, focusing on a single ecological system. This is an opportunity to integrate the range of study to a larger ecosystem.

#### Budget Costs

- Each scholarship to the Forestry Institute for Teachers is \$1,000. This includes food, lodging, materials, education curriculum specialists and a teacher stipend of \$300. Each teacher completing the institute receives \$100 of the stipend and. Upon returning the implemented curriculum unit they developed, and evidence of an "in-service" training, they receive the remaining \$200.
- Each scholarship to the Summer Agriculture Institute is \$1,500. This includes food, lodging, materials, staff, a fly-over of the wetlands and an overnight with a farm family.
- A bay institute scholarship is unknown at this time. It is estimated at \$1,000.

A Formal Proposal would present the budget of each workshop and the specific administrative costs of the joint project. Initially we are considering 15 scholarships for each institute at 3 institutes per year over a period of 3 years at approximately \$157,500.

#### Applicant Qualifications

The **Forestry Institute for Teachers** has successfully implemented 13 institutes over 5 years with approximately 540 graduates. It is administered by professional foresters and professional curriculum specialists. Presenters are practicing natural resource professionals from a variety of fields including soils, hydrology, silviculture, fire, wildlife, and social forestry. The **Summer Agriculture Institute** has been successfully implemented for 14 years with approximately 520 graduates. It is administered by agricultural and education professionals. Presenters are from all levels of the agricultural industry and state legislature. Within the speakers we tie in with agricultural ecosystems, wildlife enhancement through agriculture, laws covering agriculture balance ag and the environment including wetland preservation. The **bay institute** has not been finalized yet, but is expected to meet similar standards of professionalism and excellence.

#### Monitoring and Data Evaluation

The primary monitoring and evaluation tool of the institutes is assessment. Assessment is the method of determining what a teacher has learned and if it is being transferred to students. Assessment is done at several levels including written on-site pre and post assessments, evaluation of curriculum unit content and implementation, follow-up surveys and newsletters. Assessment is the most difficult and expensive aspect of the institutes. An additional cost would be included in the Formal Proposal to develop and institute a comprehensive assessment strategy.

#### Local Support/Coordination

Institutes coordinate with a variety of federal and state agencies, California Department of Education, local offices of education, industry, and academic institutions. Coordination and support may be provided in the form of funding, materials, services or volunteers.